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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
ALEXANDER DARDIN, ET AL.	: EXAMINER: VASISTH, VISHAL V.
SERIAL NO: 10/550,764	:
FILED: SEPTEMBER 27, 2005	: GROUP ART UNIT: 1771
FOR: LUBRICATING OIL COMPOSITION WITH GOOD FRICTIONAL PROPERTIES	:

REPLY BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is a Reply Brief to the Examiner's Answer, dated January 7, 2011, which responds to the Appeal Brief filed October 12, 2010, in the above-identified application.

VII. ARGUMENT

Ground (A)

(A) Rejection of Claims 1-14 and 17 under 35 U.S.C. §103 (a) over Mishra et al. (U.S. 5,834,408)(Mishra) in view of Pappas et al. (U.S. 3,816,314)(Pappas).

Claims 1-3, 5-14 and 17

Mishra describes copolymers of acrylates or methacrylates having a narrow molecular weight distribution which are useful as **pour point depressants** for oils of lubricating viscosity (Col. 2, lines 1-5). Appellants have shown that pour point depressant materials are

designed to prevent wax crystals in lubricants from agglomerating or fusing together at ambient temperatures or lower temperatures thus boosting the operability temperature range of engine oils so the oils remain fluid and offer engine protection at much lower temperatures. Appellants further submit that performance as a pour point depressant, requires a polymer or copolymer soluble in an oil (hydrophobic material) and having properties which promote adhesion to wax particles (hydrophobic material).

Appellants submit that Mishra nowhere discloses or suggests that the pour point depressant materials to which his invention is directed, have polar portions and nonpolar portions. Such structure is not consistent with the requirements for utility as a pour point depressant.

Mishra describes (Col. 3, lines 27-30):

> Further, monomers that provide further improvements to the performance of the copolymer properties such as dispersancy, antioxidancy and antiwear may also be included in the copolymers of the present invention.

Based on this description, the Examiner concludes the following (Examiner's Answer dated January 7, 2011, page 6, lines 6-10):

> Mishra discloses monomer with hydrophobic segments and monomers with polar segments. Mishra does not, however, disclose a concentration range for the monomers with polar segments and therefore Mishra does not disclose the lengths of the polar segments or a weight ratio between the two segments. Mishra also does not explicitly disclose weight average degree of polymerization of the hydrophobic or polar segments.

Appellants submit that in the course of three sentences, the Examiner has juxtaposed, without any technical logic anchored in the reference description, optional inclusion of monomers which have polar side chains in the copolymers to copolymers having polar segments. A careful reading of the description of Mishra shows that this reference does not

describe or suggest a polar or hydrophilic polymer segment containing a length polymerized monomers having polar group containing side chains.

The Examiner also states that it is his position that the length range is a result effective variable (Examiner's Answer dated January 7, 2011, page 7, last sentence bridging to page 8). However, the Examiner has not shown that the primary reference even contains segment lengths (multiple bonded monomers having same side chain character) and therefore such segment lengths cannot be recognized as results effective. As indicated, Mishra is directed to the technology of pour point depressants and the Examiner has not provided any technical based logic to explain why the Mishra copolymer would be modified to contain polar polymer block segments.

Appellants previously described that the present invention, the description of Mishra and the description of Pappas are each directed to different functional additives for lubricating compositions.

The Examiner has indicated that Pappas is "introduced to modify Mishra solely in terms of comonomer length (number of repeating units)" (Examiner's Answer dated January 7, 2011, page 11, lines 2-5). Appellants submit that Mishra does not disclose or suggest polar segment blocks and therefore, the Examiner's stated use of Pappas is irrelevant and can only be explained on the basis of hindsight of the present invention.

Accordingly, Appellants submit that the Examiner 's conclusion of obviousness cannot be supported and the rejection of Claims 1-14 and 17 under 35 U.S.C. §103 (a) over Mishra in view of Pappas should be reversed.

CONCLUSION

For all the above reasons, and the reasons listed in the Appeal Brief filed October 12, 2010, Appellants respectfully request that all rejections of record be reversed.

Respectfully submitted,

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